

ABSTRACT OF THE DISCLOSURE

A process for producing a low cross-linking-density gel capable of effectively inhibiting light scattering in joining the ends of optical fiber cores with each other. The process is characterized by involving the compounding step for adjusting a flexible silicone gel material to have a specified refractive index and the reaction step for cross-linking the flexible silicone gel material obtained in the above step in a binding region with a low cross-linking density, thus yielding a low cross-linking-density gel.